

# **Module 2: Diagnosis and Treatments**



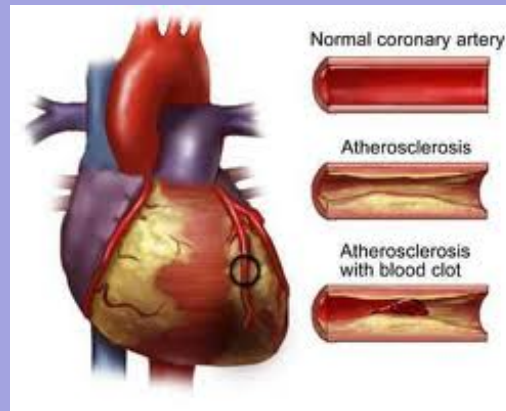
# Objectives

**By the end of this module, students will have learned...**

- diseases related to unhealthy weight
- other complications of unhealthy weight
- methods of diagnosis
- treatment strategies

# Review

- Hardening of arteries (atherosclerosis)
- High blood pressure (hypertension)
- **Heart disease**
- High cholesterol (dyslipidemia)
- **Stroke (cerebrovascular accident)**
- Heart failure
- **Cancer**
- **Diabetes**
- Stroke





# Other complications

- Skin infections/disorders
- Infertility
- Back pain
- Gallstones
- Cancer
- Sleep apnea
- Non-alcoholic Fatty Liver Disease (NAFLD)
- Osteoarthritis

# Diagnostics

- Body Mass Index (BMI)
- Waist-Hip-Ratio (WHR)
- Waist-Circumference (WC)
- Calipers
- DEXA Scan
- Hydrostatic Weighing
- BOD Pod



|                       |  |
|-----------------------|--|
| <b>SI units</b>       | $\text{BMI} = \frac{\text{weight (kg)}}{\text{height}^2(\text{m}^2)}$              |
| <b>Imperial units</b> | $\text{BMI} = \frac{\text{weight (lb)} \times 703}{\text{height}^2(\text{in}^2)}$  |
|                       | $\text{BMI} = \frac{\text{weight (lb)} \times 4.88}{\text{height}^2(\text{ft}^2)}$ |



# Treatment Strategies

- Diet
- Exercise
- Medicines
- Surgery



# Does dieting work?



- Lose about 10% of their body weight
  - Most regain 2/3 in one year
  - Most regain almost all within 5 years

# Do supplements work?

- increase energy
- reduces fat
- blocks fat
- makes you feel full



# Breast Feeding: Obesity Prevention?

- best for keiki
- fights infections
- reinforces mother & keiki bonds
- but... not shown to prevent obesity



# Healthy & Well Balanced Diet



- Enjoy all foods in moderation
- There are no “forbidden” foods, but you must practice portion-/self-control
- Because there is no one perfect food, we must enjoy a **variety of foods** in moderation
  - Include fruits, vegetables, grains, low-fat or nonfat dairy products.
  - Limit intake of trans fatty acids
- Portion sizes are key to this concept



# Lunch/Dinner Plate



# Types of Fats

- monounsaturated
- polyunsaturated
- saturated
- trans



# Sugar

**6 teaspoons (25 grams) per day.**

*- World Health Organization*



# Sugary Drinks



39 g

65g

108g

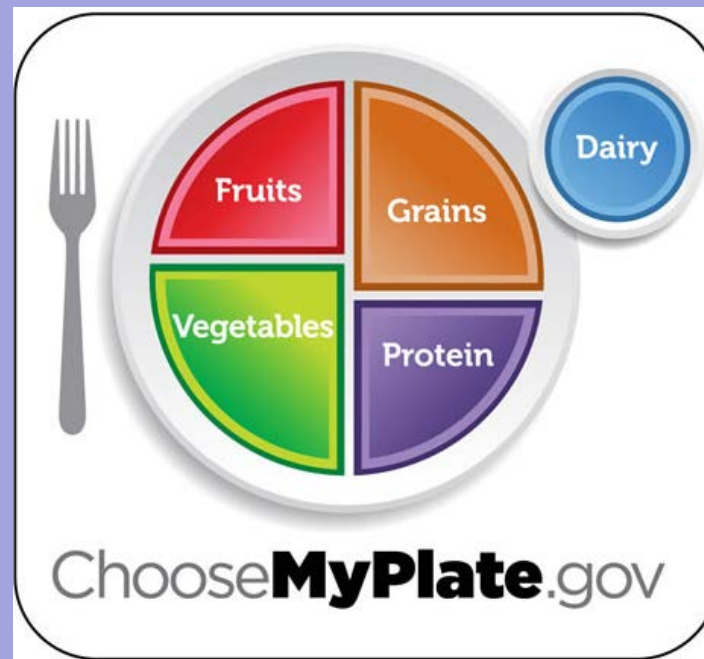


# Sugar vs. Cocaine

- Similar effects
  - binge
  - withdrawals
  - dependence



# Don't Forget.....



# Participate in Physical Activity



- Make it a lifestyle
- Regular to moderate physical activity for at least 150 minutes/week\*
- Having sex—effective?



# How much to burn off?

## Exercise Needed to Burn Off a Serving of French Fries



Average Serving of  
French Fries:  
**610 Calories**  
6.9 Ounces

### Running at 5 MPH



  
**1:05**<sup>hrs</sup>  
150 lb Adult

  
**0:49**<sup>hrs</sup>  
200 lb Adult

### Swimming



  
**1:32**<sup>hrs</sup>  
150 lb Adult

  
**1:09**<sup>hrs</sup>  
200 lb Adult

### Leisure Bicycling



  
**2:14**<sup>hrs</sup>  
150 lb Adult

  
**1:41**<sup>hrs</sup>  
200 lb Adult

### Walking at 2 MPH



  
**3:13**<sup>hrs</sup>  
150 lb Adult

  
**2:24**<sup>hrs</sup>  
200 lb Adult

### Singles Tennis



  
**1:07**<sup>hrs</sup>  
150 lb Adult

  
**0:50**<sup>hrs</sup>  
200 lb Adult

SOURCE: <https://sites.google.com/site/compendiumofphysicalactivities/>

# How do I maintain a healthy weight?

- **Physical Activity Types**
  - Aerobic
  - Muscle-strengthening
  - Bone-strengthening
  - Stretching





# Medicines

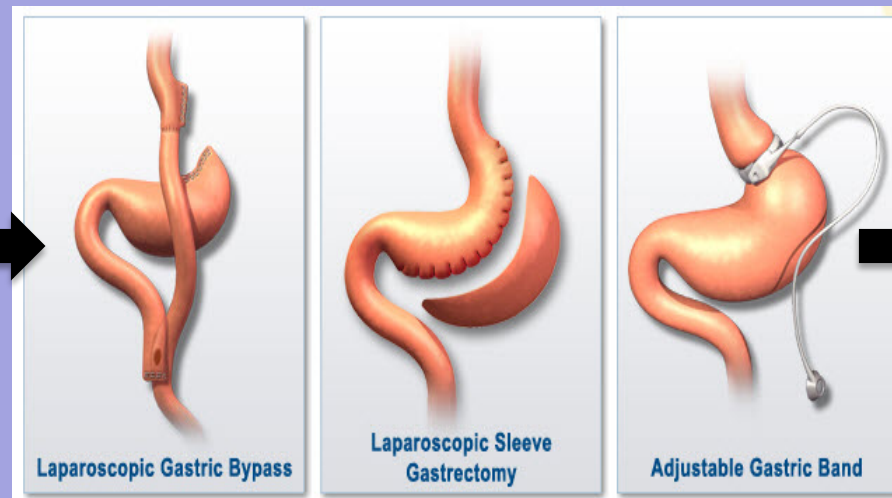
- with exercise and diet
- BMI  $\geq 30$  with no obesity-related risk factors or diseases
- *BMI of  $\geq 27$*  with obesity-related risk factors or diseases
- Medication examples:
  - Sibutramine (enhances feeling full)
  - Orlistat (blocks fat uptake)

**Source:**

Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.

# Surgery

- Gastrointestinal surgery
- For a limited number of patients
  - BMIs  $\geq 40$  or  $\geq 35$
  - diet, exercise, and medicines have failed
  - still requires diet and exercise afterwards

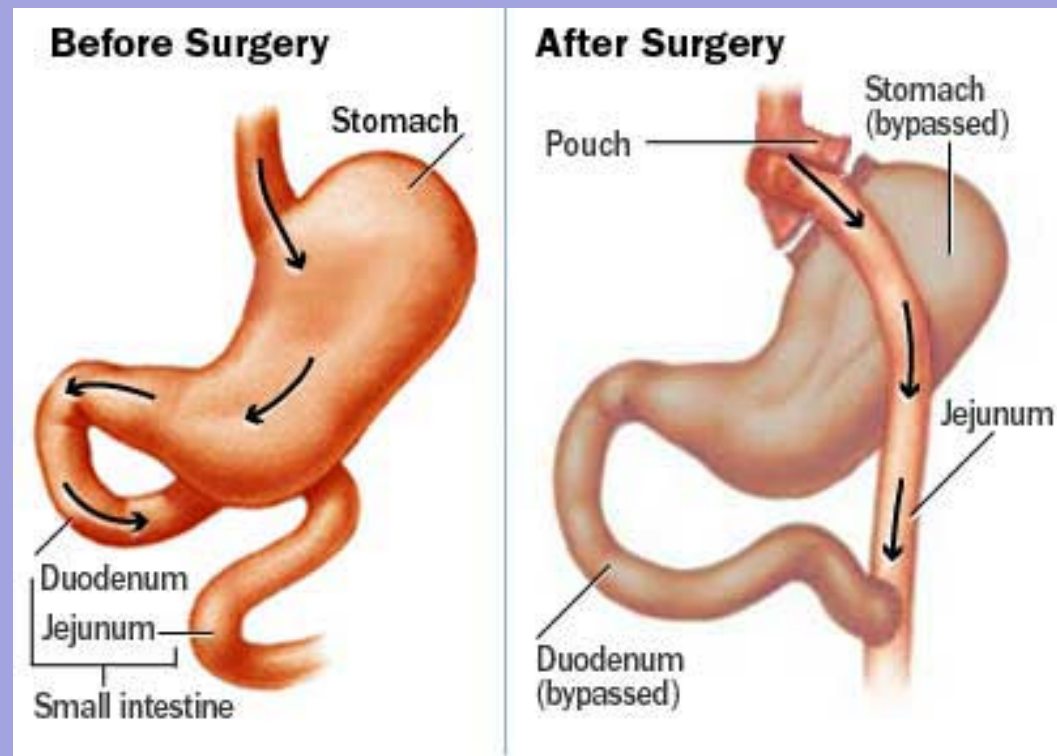


**Source:**

Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.

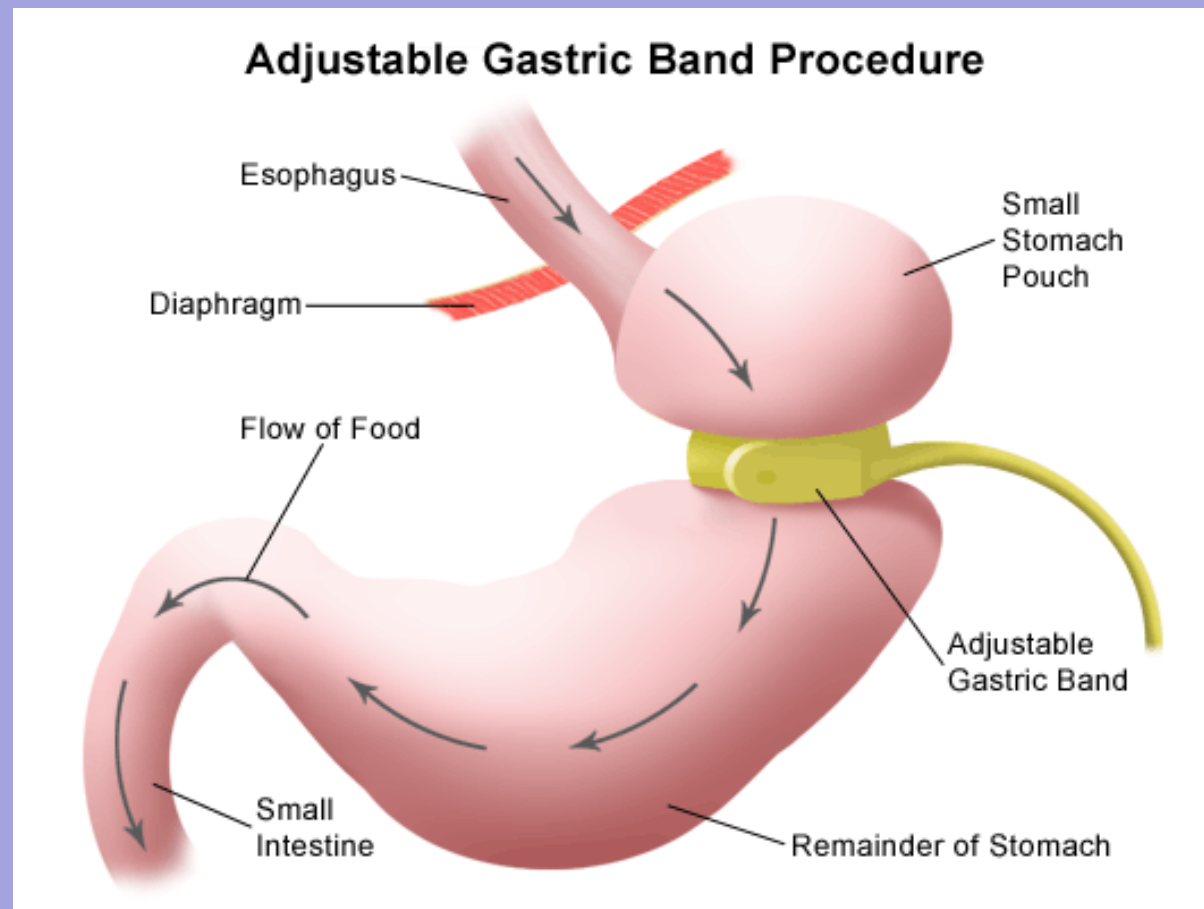
# Surgery Types

- Gastric Bypass
  - benefits & risks



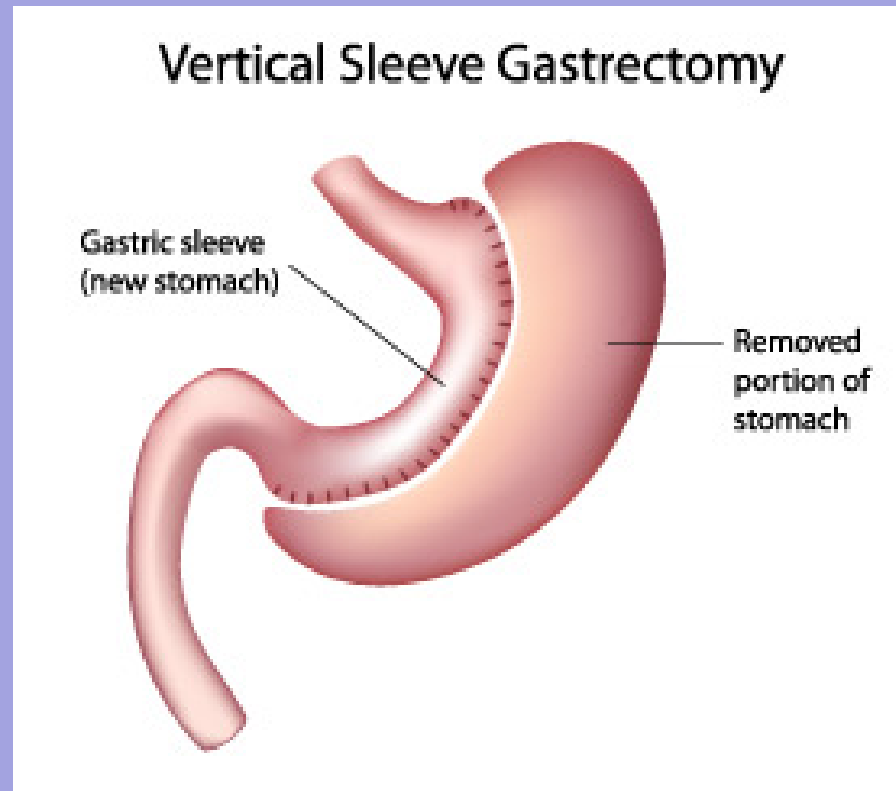
# Surgery Types

- Adjustable Gastric Banding  
- benefits & risks



# Surgery Types

- Vertical Sleeve Gastrectomy  
- benefits & risks



# What contributes to post-treatment weight gain?

- Skipping meals
- Temptations
- Old habits
- Social pressures



# Questions or Comments

